

Psychiatric diagnosis: pros and cons of prototypes vs. operational criteria

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In this issue of *World Psychiatry*, we publish several papers which are relevant to the ongoing process of revision of the two main diagnostic and classification systems we have in the field of psychiatry: the ICD-10 (chapter on mental and behavioural disorders) and the DSM-IV.

It is clear at this stage that the two revision processes are pursuing objectives which are in part different. In the case of the ICD, the main objective is to improve the public health utility of the system, and in particular its usability by a range of health professionals. In the case of the DSM, the main objective, or one of the main objectives, is to make the clinical characterization of each patient more comprehensive, by adding several dimensions to the categorical diagnosis.

In spite of these partially different (and potentially divergent) aims of the revision processes, an effort is being made to “harmonize” the two diagnostic systems. They will probably share at least the same “metastructure” and use the same nomenclature to denote the main diagnostic categories. However, a major difference will remain the fact that the ICD-11 will be based on narrative descriptions of the various mental disorders, whereas the DSM-5 will provide operational diagnostic criteria.

In the WPA-WHO Global Survey, whose results appear in this issue of the journal (1), over two-thirds of the participants (practising psychiatrists) maintained that a diagnostic system based on clinical descriptions is more clinically useful than one based on operational criteria. The proportion of DSM-IV users endorsing this position was even slightly higher than that of ICD-10 users. A reflection on the advantages and disadvantages of the two approaches seems therefore timely, and will be the theme of a Forum which will be published in a forthcoming issue of the journal. Some preliminary considerations may be meanwhile useful.

The development of operational diagnostic criteria for mental disorders in the 1970s was a response to serious concerns about the reliability of psychiatric diagnosis. Initially intended only for research purposes, the operational approach was subsequently proposed also for ordinary clinical practice by the DSM-III. That this approach increases the reliability of psychiatric diagnosis in research settings is now well documented. Much less clear, even in the US, is whether the approach is commonly used by clinicians in ordinary practice, thus really resulting in an increase of the reliability of psychiatric diagnosis in clinical settings. It has been, for instance, reported that several US clinicians have difficulties to recall the DSM-IV criteria for major depressive disorder

and rarely use them in their practice (e.g., 2). Furthermore, some of the DSM-IV cut-offs and time frames have been found not to have a solid empirical basis (e.g., 3) and to generate a high proportion of sub-threshold and “not otherwise specified” cases (e.g., 4).

More in general, it has been maintained that a “prototype matching” approach is more congruent with human (and clinical) cognitive processes than a “defining features” approach (e.g., 5). The spontaneous clinical process does not involve checking in a given patient whether each of a series of symptoms is present or not, and basing the diagnosis on the number of symptoms which are present. It rather involves checking whether the characteristics of the patient match one of the templates of mental disorders that the clinician has built up in his/her mind through his/her training and clinical experience.

Moreover, some recent research focusing on various classes of mental disorders (i.e., personality disorders, eating disorders, anxiety disorders) suggests that a diagnostic system based on refined prototypes may be as reliable as one based on operational criteria, while being more user friendly and having greater clinical utility (e.g., 6).

The issue, however, is more complex than it may appear. In fact, while it is probably true that many clinicians have difficulties to memorize, recall and correctly apply operational diagnostic criteria, it should not be taken for granted that they will not have problems to memorize, recall and correctly apply prototypes proposed by a diagnostic system. Many clinicians are reluctant to change the templates of mental disorders they have built up in their mind along the years. Being influenced by those templates, they may selectively catch or recall the various features of a prototype, or may read in a prototype description elements which are not actually there. Moreover, the expectation that a given patient will present the various components of a prototype may lead the clinician to infer the presence of clinical aspects which do not actually appear in that patient. Finally, a clinician may conclude that a patient matches a given prototype because several elements of the prototype description are present, while another clinician may conclude that the same patient does not match that prototype because some other aspects are absent. These are indeed the biases that the operational approach aimed to correct, and the risk of a return to the diagnostic chaos preceding the publication of the DSM-III should not be overlooked.

So, there are potential advantages and disadvantages in

both the “prototype matching” and the “defining features” approaches to psychiatric diagnosis. It is auspicious that research following the publication of the ICD-11 and DSM-5 will assess these pros and cons systematically, guiding further developments in psychiatric diagnosis and classification. This will more probably occur if those systems will exploit the full potential of the two approaches, i.e., if the ICD-11 will provide paragraph descriptions of the various mental disorders which are not less precise and detailed than the DSM-IV lists of symptoms, and the DSM-5 will propose cut-offs and time frames which have a reasonably strong empirical basis.

References

1. Reed GM, Correia JM, Esparza P et al. The WPA-WHO Global Survey of Psychiatrists' Attitudes Towards Mental Disorders Classification. *World Psychiatry* 2011;10:118-31.
2. Zimmerman M, Galione J. Psychiatrists' and nonpsychiatrist physicians' reported use of the DSM-IV criteria for major depressive disorder. *J Clin Psychiatry* 2010;71:235-8.
3. Kendler KS, Gardner CO, Jr. Boundaries of major depression: an evaluation of DSM-IV criteria. *Am J Psychiatry* 1998;155:172-7.
4. Zinbarg RE, Barlow DH, Liebowitz M et al. The DSM-IV field trial for mixed anxiety-depression. *Am J Psychiatry* 1994;151:1153-62.
5. Ortigo KM, Bradley B, Westen D. An empirically based prototype diagnostic system for DSM-V and ICD-11. In: Millon T, Krueger RF, Simonsen E (eds). *Contemporary directions in psychopathology: scientific foundations of the DSM-V and ICD-11*. New York: Guilford, 2010:374-90.
6. Westen D, Shedler J, Bradley R. A prototype approach to personality disorder diagnosis. *Am J Psychiatry* 2006;163:846-56.